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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,154	01/11/2002	Ken Ishitobi	Q62628	5825

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EXAMINER	
METZMAIER, DANIEL S	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,154	ISHITOBI ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *13-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *102003*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claims 1-20 are pending. Claims 1-12 have been treated on the merits and claims 13-20 have been withdrawn as directed to an invention elected without traverse.

Applicants' (page 12 of response) request for clarification of the paragraph at the top of page 6 of the Office Action is noted. Applicants' interpretation regarding the inadvertent reference to Peterson is correct. Said reference should have been to White. The examiner regrets any inconvenience.

Election/Restrictions

1. Applicant's election of Group I, claims 1-12, in Paper filed Oct. 1, 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on July 5, 2000. A copy of the certified priority document has been obtained and included with the file papers to be scanned.

3. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Information Disclosure Statement

4. US Patent 6,270,393 corresponds as a patent family member to CN 1251380 cited in Applicants Information Disclosure Statement filed Oct. 1, 2003. The references cited in the Information disclosure statement are noted as pertainent to the claimed invention as well as the communication from the Chinese Patent Office and a holding of

non-patentability based on said references. Said references are considered to be cumulative to or of less relevance than those of record.

Claim interpretation

5. The following claim observations/interpretations are made here as they pertain to the following rejections. Claims 10-12 set forth the concentration of the polishing accelerator and sol product. None of the remaining claims set forth any concentrations of the components of the sol product. The broad language of the salts forming the sol product and the polishing accelerator overlap. The preamble sets forth a polishing composition and reads on compositions that have the function of polishing, ie, polishing properties.

The sol product is set forth a mixture comprising the species set forth in (i) or (ii) of claim 1. Said claim employs open language and is open to further ingredients including boehmite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-7 and 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nissan Chemical Industries, Ltd., WO 99/35089 (hereafter Nissan), as evidenced by Erikson, US 6,080,216. The claims are directed to a polishing composition comprising an alumina sol derived from an alumina salt. Claims directed to products by process are examined based on the product obtained rather than the method of making said product. The process limitations are given weight only to the extent the process limitation impart a patentable distinction to the product.

Nissan (example 1, page 16, second full paragraph) discloses alumina sols employing a polishing accelerator comprising basic aluminum nitrate. Said basic aluminum nitrate would have been expected to have limited solubility and result in the formation of sol particles for at least a portion of the basic aluminum nitrate. Said sol products are derived from an aluminum salt.

Erikson is cited (column 13, line 60, to column 14, line 8) as evidence that the art recognizes solution-based compositions or sols are made by dissolving aluminum salts such as basic aluminum nitrate in water and the use of Basic aluminum nitrate in the Nissan reference would have been expected to produce at least some sol particles as claimed.

Furthermore and to the extent the alumina is not derived from an aluminum salt, the disclosed alumina for polishing is a commercial alumina sol. Since, alumina is Al_2O_3 and the reference teaches the same utility as instantly disclosed and set forth in the preamble, the alumina sol of the reference reads on the claimed alumina sol. The derivation of the alumina sol has not been shown to impart patentable distinction to the otherwise known materials.

Nissan (page 12, first full paragraph) discloses the polishing accelerator is employed in a concentration of 0.1 to 10% by weight. Nissan (page 10, fifth full paragraph) discloses the concentrations of the alumina ranging from 0.5 to 20% by weight.

To the extent the Nissan compositions differ from the instant claims in the derivation of the alumina sol from an aluminum salt or the characterization of the accelerator as sol particles, said sol has not been shown to impart a patentable distinction to the compositions, which are employed the same components having overlapping contrations thereof in the same utility, eg, polishing.

Nissan (page 8) discloses conventional processes may obtain the alumina hydrate. It is conventional to obtain alumina hydrate from aluminum salts and alkali

and/or ammonia base. Said alumina produced from salts has not been shown to be distinct from the alumina disclosed in the Nissan reference.

10. Claims 1-7 and 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamada et al, US 5,366,542. Yamada et al (example 2 and claims) discloses polishing compositions comprising alumina dispersed in water and in combination with aluminum salts and aminocarboxylic acid salts as chelating agents and polishing accelerators. Patentees claimed concentration ranges for the alumina reads on the instant claim 11 and 12 concentration for the sol product.

Yamada et al (examples) discloses alumina dispersions employing a polishing accelerator. The disclosed alumina for polishing is an alumina dispersed in water and has a particle size of about 1.5 microns. Said dispersions read on alumina sols, which are defined as colloidal solutions. Since, alumina is Al_2O_3, the reference teaches the same utility as instantly disclosed and set forth in the preamble; the alumina sol of the reference reads on the claimed alumina sol. The derivation of the alumina sol has not been shown to impart patentable distinction to the otherwise known materials.

To the extent the Yamada et al compositions differ from the instant claims in the derivation of the alumina sol from an aluminum salt has not been shown to impart a patentable distinction to the compositions, which are employed in the same utility, polishing.

11. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissan Chemical Industries, Ltd., WO 99/35089 (hereafter Nissan), as evidenced by

Erikson, US 6,080,216, as applied to claims 1-7 and 10-12 above, and further in view of Peterson, US 5,669,941. Nissan discloses the compositions as set forth in the above rejections over the same reference. Said rejection is incorporated herein by reference.

To the extent Nissan differs from claims 3-9 in the species in the sol product, the Peterson reference teaches conventional dispersions aids for the advantage of improving dispersion stability.

Peterson (columns 15-18) discloses alumina sols and alumina particle dispersions. Peterson (column 17, lines 23-39) discloses dispersion aids including ammonium hydroxide, aluminum chlorides or basic aluminum nitrates and the concentration depends on the concentration of the surface area of the dispersed particles.

These references are combinable because they teach alumina sols and alumina dispersions. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ conventional dispersions aids as disclosed in the Peterson reference for the advantage of improving dispersion stability.

12. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al, US 5,366,542, as applied to claims 1-7 and 10-12 above, and further in view of Peterson, US 5,669,941. Nissan discloses the compositions as set forth in the above rejections over the same reference. Said rejection is incorporated herein by reference.

To the extent Yamada et al differs from claims 8-9 in the species in the sol product, the Peterson reference teaches conventional dispersions aids for the advantage of improving dispersion stability.

Peterson (columns 15-18) discloses alumina sols and alumina particle dispersions. Peterson (column 7, lines 23-39) discloses dispersion aids including ammonium hydroxide, aluminum chlorides or basic aluminum nitrates and the concentration depends on the concentration of the surface area of the dispersed particles.

These references are combinable because they teach alumina sols and alumina dispersions. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ conventional dispersions aids as disclosed in the Peterson reference for the advantage of improving dispersion stability.

Response to Arguments

13. Applicant's arguments filed October 1, 2003 have been fully considered but they are not persuasive.

14. Applicants refer to the priority document as filed in the PCT, which this application is a continuation-in-part. The examiner has obtained a copy of the certified priority document for applicants' convenience from the EPO web cited.

15. The domestic priority has been acknowledged at least once.

16. Applicants (page 13) assert because claims 4 and 6 were not included in the rejection based on the Nissan reference, the claims as amended are free from the Nissan reference. Said argument is moot in view of the above rejection.

17. Applicants (pages 13-15) assert Yamada et al lacks a sol product obtained from an aluminum salt. It is specifically unclear how said limitation distinguishes the claims from the reference since the reference teaches the combination of a aluminum salt and a chelating agent, both reading on the precursors claimed, employed in concentrations substantially overlapping those claimed and clearly encompassing those instantly exemplified. Applicants example merely mix the components to form the sols without further steps and/or modification, such as hydrothermal treatment.

Furthermore, Yamada et al teaches (column 3, lines 19-21) boehmite sols in addition to the addition to the use of aluminum salts and chelating agents. Applicants have not set forth a nexus between the methods the sols are made and the resulting compositions, which would distinguish said compositions over the prior art.

18. Applicants (page 14) assert the Yamada et al reference exemplifies micron sized particles and refers to slurries rather than colloidal sols. Applicants' claims are directed to (a) water, (b) alumina crystal, and (c) a sol product. None of the pending claims define any particle size nor do any of the claims define the sols as colloidal. Only claims 10-12 set forth concentrations of the polishing accelerator or sol product in the overall compositions. It is noted, said concentrations overlap. Yamada et al, at a minimum, teaches (column 3, lines 19-21) boehmite (alumina) sols. A number of methods of making alumina sols are known including those employing a mixture of an aluminum salt with a base and/or chelating agent.

19. Applicants (pages 15 and 16) assert the Peterson reference fails to supply the deficiencies of the Nissan and Yamada et al references. Said components are clearly

known as conventional additives in making polishing compositions for the advantage of stability.

It is noted the claims are directed to (c) the sol product of (i) or (ii). Applicants have not indicated why the sol products

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone

number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1089.

Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM